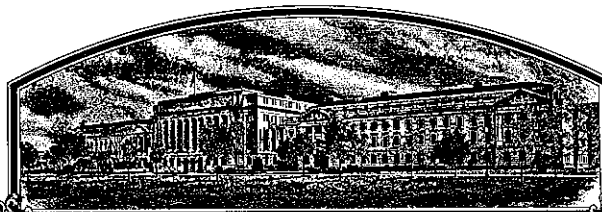


No.

8300042



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Nickerson American Plant Breeders, Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE
Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *eighteen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS LOTS OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS PROVIDED BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

WHEAT

'Jesse'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this 28th day of February in the year of our Lord one thousand nine hundred and eighty-six.

Attest:

Kenneth A. ...
Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

F. W. ...
Acting Secretary of Agriculture

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: See Reverse.

No certificate for plant variety protection may be issued unless a completed application form has been received (5 U.S.C. 553).

1a. TEMPORARY DESIGNATION OF VARIETY W391-77 R. 11		1b. VARIETY NAME Jesse		FOR OFFICIAL USE ONLY PV NUMBER 8300042	
2. KIND NAME Hard Red Winter Wheat		3. GENUS AND SPECIES NAME Triticum aestivum		FILING DATE 1-10-83	TIME 8:30 A.M. XXX
4. FAMILY NAME (BOTANICAL) Gramineae		5. DATE OF DETERMINATION 1=Sept. 1980 2=Sept. 1981		FEE RECEIVED \$ 1,000	DATE 1-10-83
6. NAME OF APPLICANT(S) NICKERSON North American Plant Breeders, Inc.		7. ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) 5201 Johnson Drive, P.O. Box 2955 Mission, KS 66201		8. TELEPHONE AREA CODE AND NUMBER 913-384-4940 KS 303-532-3721 CO	
9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: (Corporation, partnership, association, etc.) Partnership		10. IF INCORPORATED, GIVE STATE AND DATE OF INCORPORATION Stamford, CT		11. DATE OF INCORPORATION March 1973	
12. NAME AND MAILING ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS: R.E. HEINER G.E. DIXON P.O. Box 2955 Mission, KS 66201		ROBERT F. BRUNS R.E. Heiner or C. Bruns P.O. Box 30 Berthoud, CO 80513			

13. CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:

- ☒ 13A. Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.)
- ☒ 13B. Exhibit B, Novelty Statement.
- ☒ 13C. Exhibit C, Objective Description of the Variety (Request form from Plant Variety Protection Office.)
- ☒ 13D. Exhibit D, Additional Description of the Variety.
- X 13E. Exhibit E., Quality data

14a. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See Section 83(a). (If "Yes," answer 14B and 14C below.) ☒ YES ☐ NO

14b. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? ☒ YES ☐ NO

14c. IF "YES," TO 14B, HOW MANY GENERATIONS OF PRODUCTION BEYOND BREEDER SEED? ☒ FOUNDATION ☒ REGISTERED ☒ CERTIFIED

15a. DID THE APPLICANT(S) FILE FOR PROTECTION OF THIS VARIETY IN OTHER COUNTRIES? ☐ YES ☒ NO (If "Yes," give name of countries and dates.)

15b. HAVE RIGHTS BEEN GRANTED THIS VARIETY IN OTHER COUNTRIES? ☐ YES ☒ NO (If "Yes," give name of countries and dates.)

16. DOES THE APPLICANT(S) AGREE TO THE PUBLICATION OF HIS/HER (THEIR) NAME(S) AND ADDRESS IN THE OFFICIAL JOURNAL? ☒ YES ☐ NO

17. The applicant(s) declare(s) that a viable sample of basic seed of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

December 14, 1982
(DATE)

Dec 20th 1982
(DATE)

Robert E. Heiner
(SIGNATURE OF APPLICANT)

G. E. Dixon
(SIGNATURE OF APPLICANT)

Exhibit A

Origin and Breeding History of Jesse

PEDIGREE: III18889/Trapper//C0652643/3/Baca

DATE OF CROSS: 1973

HISTORY: The breeding history of Jesse started in 1973 with the cross of C0701411 (F₆) and Baca. This F₁ was increased in 1974, and grown as an F₂ population in 1975. Single rows of F₃ lines were grown in 1976 at 3 locations. One of these lines was advanced into regional yield trials in 1977. In 1979, headrows were grown in Berthoud, Colorado. One of the rows was distinctly different from the majority and was harvested separately and given the designation W391-77 A2 R11. Jesse was put into full regional testing in 1981 and Breeders seed increases were initiated. Approximately 2700 units of Foundation seed were produced in 1982.

Jesse is uniform and stable. Less than .5% of the plants have been rogued from the Registered fields in 1982. Approximately 90% of these rogued plants have been three to twelve centimeters taller than Jesse. Less than .5% of these taller plants may be encountered in subsequent generations.

EXHIBIT B.
NOVELTY STATEMENT

Jesse is most similar to the two hard red winter wheats Hawk and Newton. However, it can be distinguished on the following morphological characteristics:

-Jesse and Newton differ significantly in beak length, (see supporting data page 1.)

-Jesse differs significantly in test weight from both Hawk and Newton, (see supporting statistical data page 2).

-Jesse displays a light brown phenol reaction (category #3), while Hawk displays a mixed reaction of 20% brown and 80% light brown; Newton displays a brown phenol reaction (category #4).

-Jesse and Hawk both have acuminate type beak lengths, however Jesse's beak length is significantly shorter than Hawk's, (see supporting statistical data page 4).

Anova Table

Beak Lengths of Jesse and Newton

Source	df	ss	ms
Total	149	297.86	
VAR (beak)	4	68.83	17.21**
Error	145	229.03	1.58

F test 10.89
LSD (.05) .64

<u>Variety</u>	<u>Beak Length (mm)</u>	<u>Significance (.05)</u>
HW77-391S4	5.80	
Hawk	4.74	
Jesse	4.62	
HW79-347	4.05	
Newton	3.87	

ANOVA TABLE FOR BEAK LENGTH

'JESSE vs. HAWK'

<u>SOURCE</u>	<u>df</u>	<u>SS</u>	<u>ms</u>
Total	99	716.515	
VAR	1	259.534	259.53360**
ERROR	98	456.981	4.66307

F TEST=55.657**

CV=4.7

LSD (5%)=0.122

MEANS FOR EACH VARIETY

JESSE=4.652 mm

HAWK=7.874 mm

8300042

Anova Table

Test Weight of Jesse, Hawk and Newton

6 - 81
 13 - 82
 19 locations

Source	df	ss	ms
Total	56	688.39	
Loc	18	633.75	36.87**
VAR	2	16.94	8.47**
Error	36	37.69	1.05

LSD 5% .67
 LSD 1% .91

<u>VAR</u>	<u>MEAN</u>	
Hawk	56.8	* 1%
Jesse	58.0	
Newton	57.2	* 5%
Mean	57.4	

Variety: JESSE

FORM APPROVED. OMB NO. 40-R3712

FORM GR-470-6
(2-15-73)UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
GRAIN DIVISION
HYATTSVILLE, MARYLAND 20782EXHIBIT C
(Wheat)OBJECTIVE DESCRIPTION OF VARIETY
WHEAT (TRITICUM SPP.)

INSTRUCTIONS: See Reverse.

NAME OF APPLICANT(S)

NORTH American Plant Breeders, INC.

FOR OFFICIAL USE ONLY

PVPO NUMBER

8300042

ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code)

5201 Johnson Drive, P.O. Box 2955
Mission, KS 66201VARIETY NAME OR TEMPORARY
DESIGNATION

JESSE

Place the appropriate number that describes the varietal character of this variety in the boxes below.
Place a zero in first box (e.g. 089 or 09) when number is either 99 or less or 9 or less.

1. KIND:

1 1 = COMMON 2 = DURUM 3 = EMMER 4 = SPELT 5 = POLISH 6 = POULARD 7 = CLUB

2. TYPE:

2 1 = SPRING 2 = WINTER 3 = OTHER (Specify) 2 1 = SOFT 2 = HARD 3 = OTHER (Specify)2 1 = WHITE 2 = RED 3 = OTHER (Specify)3. SEASON - NUMBER OF DAYS FROM ~~planting~~ TO:231 FIRST FLOWERING 237 LAST FLOWERING

4. MATURITY (50% Flowering):

01 NO. OF DAYS EARLIER THAN 2 1 = ARTHUR 2 = SCOUT 3 = CHRIS
-- NO. OF DAYS LATER THAN - 4 = LEMHI 5 = NUGAINES 6 = LEEDS

5. PLANT HEIGHT (From soil level to top of head):

092 CM. HIGH
-- CM. TALLER THAN - 1 = ARTHUR 2 = SCOUT 3 = CHRIS
13 CM. SHORTER THAN 2 4 = LEMHI 5 = NUGAINES 6 = LEEDS

6. PLANT COLOR AT BOOTING (See reverse):

2 1 = YELLOW GREEN 2 = GREEN 3 = BLUE GREEN

7. ANTHUR COLOR:

1 1 = YELLOW 2 = PURPLE

8. STEM:

1 Anthocyanin: 1 = ABSENT 2 = PRESENT 2 Waxy bloom: 1 = ABSENT 2 = PRESENT
2 Hairiness of last internode of rachis: 1 = ABSENT 2 = PRESENT 1 Internodes: 1 = HOLLOW 2 = SOLID
04 NO. OF NODES (Originating from node above ground) 29 CM. INTERNODE LENGTH BETWEEN FLAG LEAF AND LEAF BELOW

9. AURICLES:

1 Anthocyanin: 1 = ABSENT 2 = PRESENT 2 Hairiness: 1 = ABSENT 2 = PRESENT

10. LEAF:

1 Flag leaf at booting stage: 1 = ERECT 2 = RECURVED 2 Flag leaf: 1 = NOT TWISTED 2 = TWISTED
1 Hairs of first leaf sheath: 1 = ABSENT 2 = PRESENT 2 Waxy bloom of flag leaf sheath: 1 = ABSENT 2 = PRESENT
12 MM. LEAF WIDTH (First leaf below flag leaf) 20 CM. LEAF LENGTH (First leaf below flag leaf):

FORM GR-470-6 (REVERSE)

11. HEAD:

3 Density: 1 = LAX 2 = DENSE 3 = Middense 2 Shape: 1 = TAPERING 2 = STRAP 3 = CLAVATE
4 = OTHER (Specify) _____

4 Awnedness: 1 = AWNLESS 2 = APICALLY AWNLETED 3 = AWNLETED 4 = AWNED

1 Color at maturity: 1 = WHITE 2 = YELLOW 3 = PINK 4 = RED
5 = BROWN 6 = BLACK 7 = OTHER (Specify): _____

6.9 CM. LENGTH 10 MM. WIDTH

12. GLUMES AT MATURITY:

2 Length: 1 = SHORT (CA. 7 mm.) 2 = MEDIUM (CA. 8 mm.) 2 Width: 1 = NARROW (CA. 3 mm.) 2 = MEDIUM (CA. 3.5 mm.)
3 = LONG (CA. 9 mm.) 3 = WIDE (CA. 4 mm.)

3 Shoulder 1 = WANTING 2 = OBLIQUE 3 = ROUNDED
shape: 4 = SQUARE 5 = ELEVATED 6 = APICULATE 3 Beak: 1 = OBTUSE 2 = ACUTE 3 = ACUMINATE

13. COLEOPTILE COLOR:

1 1 = WHITE 2 = RED 3 = PURPLE

14. SEEDLING ANTHOCYANIN:

2 1 = ABSENT 2 = PRESENT (slight)

15. JUVENILE PLANT GROWTH HABIT:

2 1 = PROSTRATE 2 = SEMI-ERECT 3 = ERECT

16. SEED:

3 Shape: 1 = OVATE 2 = OVAL 3 = ELLIPTICAL 1 Check: 1 = ROUNDED 2 = ANGULAR

2 Brush: 1 = SHORT 2 = MEDIUM 3 = LONG 1 Brush: 1 = NOT COLLARED 2 = COLLARED

3 Phenol reaction 1 = IVORY 2 = FAWN 3 = LT. BROWN
(See instructions): 4 = BROWN 5 = BLACK

3 Color: 1 = WHITE 2 = AMBER 3 = RED 4 = PURPLE 5 = OTHER (Specify) _____

6.6 MM. LENGTH 3.5 MM. WIDTH 4.4 GM. PER 1000 SEEDS

17. SEED CREASE:

1 Width: 1 = 60% OR LESS OF KERNEL 'WINOKA'
2 = 80% OR LESS OF KERNEL 'CHRIS'
3 = NEARLY AS WIDE AS KERNEL 'LEMHI'

1 Depth: 1 = 20% OR LESS OF KERNEL 'SCOUT'
2 = 35% OR LESS OF KERNEL 'CHRIS'
3 = 50% OR LESS OF KERNEL 'LEMHI'

18. DISEASE: (0 = Not Tested, 1 = Susceptible, 2 = Resistant) 3 = Moderate Resistant 4 = Moderate susceptible

3 STEM RUST (Races) 15 & 151 4 LEAF RUST (Races) Field Races 0 STRIPE RUST (Races) 0 LOOSE SMUT

0 POWDERY MILDEW 0 BUNT 2 OTHER (Specify) Soil Borne Mosaic Virus

19. INSECT: (0 = Not Tested, 1 = Susceptible, 2 = Resistant) 3 = Moderate Resistant

0 SAWFLY 0 APHID (Bydv.) 1 GREEN BUG 0 CEREAL LEAF BEETLE

— OTHER (Specify) _____ HESSIAN FLY RACES: 1 GP 0 A 0 B 0 C
0 D 0 E 0 F 0 G

20. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED:

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant tillering	Hawk	Seed size	Hawk
Leaf size	Hawk	Seed shape	Hawk
Leaf color	Hawk	Coleoptile elongation	Hawk
Leaf carriage	Hawk	Seedling pigmentation	Hawk

INSTRUCTIONS

GENERAL: The following publications may be used as a reference aid for the standardization of terms and procedures for completing this form:

- (a) L.W. Briggie and L. P. Reitz, 1963, Classification of Triticum Species and Wheat Varieties Grown in the United States, Technical Bulletin 1278, United States Department of Agriculture.
- (b) W.E. Walls, 1965, A Standardized Phenol Method for Testing Wheat Seeds for Varietal Purity, contribution No. 28 to the handbook of seed testing prepared by the Association of Official Seed Analysts. (See attachment.)

LEAF COLOR: Nickerson's or any recognized color fan should be used to determine the leaf color of the described variety.

Exhibit D

Additional Description of Jesse

Jesse is a hard red winter wheat tested as W391-77 R. 11.

It was developed by ^{NICKEDSON} North American Plant Breeders' ^{JWC.}

Jesse is an intermediate height semi-dwarf variety with good straw strength, intermediate to early maturity, and fair winter-hardiness. Milling and baking properties are good with a tendency towards long mix time.

Juvenile plant growth habit is semi-erect. Plant color at boot is green with an erect, twisted flag leaf. Head shape is strap to tapering, middense, awned and head color is white at maturity. Glumes are of medium length and width with rounded to square shoulders and acuminate beaks. Seed shape is ovate to elliptical with rounded cheeks. Seed crease width is narrow and depth is shallow. Brush is midsized to large.

Jesse is adapted to Northern Texas, Oklahoma, Kansas, Colorado, Missouri and the southern tier of counties in Nebraska.

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1/23/85

YEAR: 1982

North American Plant Breeders
HARD RED WINTER WHEAT QUALITY

PAGE 3.

YEAR	SAMPLE NAME	LOC	WHEAT--FLOUR QUALITY										BAKING QUALITY										TOTAL SCORE
			TEST WT.	WHT 14%mb	FLR YLD	FLR PROT	FLR 14%mb	FLR PROT	ASH	MIX CURVE	ABS. %	MIX TIME min	DOUGH R	LOAF CC	CHAR VOL	CRUMB			MILL SCORE	BAKE SCORE			
																GRN	TEX	COL					
81	JESSE	SO	62.6	12.3	72.0	11.8	0.413	7	63.0	3.0	9	800	8	8	8	8	8	8	85-B	82-B	167-B		
81	JESSE	LK	57.7	12.5	73.3	11.9	0.470	8	61.0	4.0	8	910	8	9	9	9	9	9	84-B	85-B	169-B		
81	JESSE	HN	59.4	11.9	74.7	11.3	0.374	6	61.0	4.3	8	950	8	8	8	8	8	8	77-C	86-B	163-B		
82	JESSE	BR	63.2	12.8	74.6	11.7	0.371	5	61.0	3.5	8	850	8	8	9	9	9	9	81-B	82-B	163-B		
	JESSE	EO	53.4	12.7	69.9	11.5	0.470	5	63.0	6.0	8	850	8	9	9	9	9	9	64-D	91-B	145-C		
82	JESSE	LK	58.5	12.5	71.8	11.0	0.447	6	62.0	4.3	9	770	7	8	8	8	8	8	77-C	79-C	156-C		
82	JESSE	CK	54.7	12.2	70.8	10.9	0.459	4	61.0	6.0	9	850	7	8	9	9	9	9	60-D	77-C	137-D		
	AVERAGE		58.5	12.4	72.4	11.4	0.429	6	61.7	4.7	8	854	8	8	9	9	9	9	77-C	82-B	159-C		
81	HAWK	SO	61.5	12.2	72.9	11.6	0.423	8	63.0	3.0	8	900	9	9	9	9	9	9	88-B	87-B	175-B		
81	HAWK	LK	55.4	13.4	73.0	12.7	0.465	9	63.0	3.8	9	975	9	8	9	9	9	9	89-B	88-B	177-B		
81	HAWK	HN	59.2	12.4	73.6	11.4	0.357	6	60.0	3.8	9	960	9	8	9	9	9	9	79-C	86-B	165-B		
81	HAWK	BR	61.2	11.8	74.9	11.1	0.401	5	61.0	3.0	8	800	8	7	8	8	8	8	76-C	76-C	152-C		
82	HAWK	EO	51.0	14.1	66.7	12.9	0.437	6	63.0	4.5	8	1000	7	8	9	9	9	9	67-D	90-A	157-C		
82	HAWK	LK	58.8	12.9	72.7	11.4	0.442	6	61.0	3.8	8	825	7	8	8	8	8	8	79-C	78-C	157-C		
82	HAWK	CK	53.5	13.0	71.8	11.3	0.482	5	59.0	4.8	8	880	8	9	9	9	9	9	68-D	80-B	148-C		
	AVERAGE		57.2	12.8	72.2	11.8	0.430	6	61.4	4.1	8	891	8	8	9	9	9	9	79-C	82-B	161-B		
81	NEWTON	SO	61.8	11.9	68.5	11.1	0.400	7	61.0	3.5	9	790	8	8	9	9	9	9	75-C	80-B	155-C		
81	NEWTON	LK	56.8	13.5	69.8	12.3	0.449	7	62.0	3.0	9	1000+	8	8	9	9	9	9	78-C	80-A	164-B		
81	NEWTON	HN	59.9	11.5	70.4	10.5	0.339	6	59.0	3.5	8	875	8	8	9	9	9	9	72-C	78-C	150-C		
81	NEWTON	BR	62.0	12.5	73.4	12.0	0.386	5	63.0	2.0	8	810	7	8	8	8	8	8	83-B	77-C	160-B		
82	NEWTON	EO	52.7	13.0	63.3	11.7	0.385	5	61.0	4.5	8	950	9	9	9	9	9	9	59-F	88-B	147-C		
82	NEWTON	LK	59.9	12.1	69.8	10.9	0.357	6	62.0	4.0	9	750	7	7	8	8	8	8	72-C	78-C	150-C		
82	NEWTON	CK	56.2	11.5	70.3	10.1	0.357	5	60.0	4.3	9	830	8	8	9	9	9	9	63-D	81-B	144-C		
	AVERAGE		58.5	12.3	69.4	11.2	0.388	6	61.1	3.5	9	865	8	8	9	9	9	9	72-C	83-B	153-C		

GRADES: A-EXCELLENT 9-10=EXCELLENT B-GOOD 8=GOOD C-ACCEPTABLE 7=ACCEPTABLE D-QUESTIONABLE 5=QUESTIONABLE F-UNACCEPTABLE 1-4=UNACCEPTABLE